

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A trawling vessel for use with a trawl net ~~(5)~~ for catching marine bio-resources, with a trawl sack ~~(3)~~ attached aft on a trawl net ~~(5)~~ for keeping the catch, said vessel comprising lines ~~(51, 61)~~ for towing and hauling said trawl net ~~(5)~~ and trawl drums ~~(6)~~ for hauling said trawl net ~~(5)~~;

with a lock chamber ~~(1)~~ in a stern ~~(21)~~ of said vessel, said lock chamber ~~(1)~~ having a main portion of its volume below said a design water line of said vessel, said lock chamber ~~(1)~~ being arranged for hauling said trawl sack ~~(3)~~ with the catch from the sea, through a sluiceway ~~(2)~~ in said stern ~~(21)~~, and said lock chamber ~~(1)~~ being arranged for discharge of said trawl sack ~~(3)~~ and for temporarily keeping said catch; and

with ~~a trunk channel (16,12)~~ a forward trunk channel and an aft trunk channel leading up from said lock chamber ~~(1)~~ and being arranged so that said trawl sack ~~(3)~~, in a generally discharged state, may be hauled up through at least one of said trunk channels ~~(16,12)~~ to a deck ~~(24)~~, thereby leaving said catch in said lock chamber ~~(1)~~; characterized by

a ceiling ~~(18)~~ covering generally all of said lock chamber ~~(1)~~, with ~~a said~~ forward trunk channel ~~(16)~~ running through said ceiling ~~(18)~~;

in which a portion of the ceiling of the lock chamber is arranged to extend below the vessel's water line, for the prevention of free surface wave formation in the lock chamber,

~~an said~~ aft trunk channel ~~(12)~~ extending up through said ceiling ~~(18)~~ from an aft end of said lock chamber ~~(1)~~, arranged for the entire, or an aft part, ~~(32)~~ of said trawl sack ~~(3)~~ in a generally discharged state, to be pulled up through said aft trunk channel ~~(12)~~.

2. (Currently Amended) The vessel of claim 1, having a forward trunk channel ~~(16)~~ leading up from a forward end of said lock chamber ~~(1)~~ and arranged so that said trawl sack ~~(3)~~, in a generally discharged state, may be hauled up through said forward trunk ~~(16)~~ channel to a deck ~~(24)~~, leaving said catch in said lock chamber ~~(1)~~.

3. (Currently Amended) The vessel of claim 1, having trawl winches ~~(62)~~ for said lines ~~(51,~~

~~61~~) for towing and hauling said trawl net ~~(5)~~.

4. (Currently Amended) The vessel of claim 1, said lines being port and starboard lines ~~(51, 61)~~, said lines provided with port and starboard trawl doors ~~(60sb, 60p)~~ arranged on said port and starboard ~~ancillary~~ lines ~~(51, 61)~~ respectively, for spreading port and starboard front ends ~~(53, 54)~~ of said trawl net ~~(5)~~.

5. (Currently Amended) The vessel of claim 1, in which said ~~mainly water-filled~~ lock chamber, mainly water-filled, ~~(1)~~ being for hauling said trawl net ~~(5)~~ in addition to said trawl sack ~~(3)~~ with the catch, from the sea, through said sluiceway ~~(2)~~ to said lock chamber ~~(1)~~.

6. (Currently Amended) The vessel of claim 1, having a widened upper mouth of said trunk channels ~~(16, 12)~~ for facilitating using either starboard or port trawl winches ~~(6sb, 7sb, 6p, 7p)~~ for hauling said net ~~(5)~~ or said trawl sack ~~(3)~~.

7. (Currently Amended) The vessel of claim 1, said sluiceway ~~(2)~~ also being arranged mainly below said vessel's design water line in said stern ~~(21)~~.

8. (Currently Amended) The vessel of claim 1, having a lock gate ~~(9)~~ for closing and opening said sluiceway ~~(2)~~.

9. (Currently Amended) The vessel of claim 1, said sluiceway ~~(2)~~ arranged near a ~~centreline~~ centerline in said stern ~~(21)~~.

10. (Currently Amended) The vessel of claim 1, stern being a transom stern ~~(21)~~.

11. (Currently Amended) The vessel of claim 1, a trawl sack extension ~~(35)~~ arranged between said trawl net and said trawl sack ~~(3)~~.

12. (Currently Amended) The vessel of claim 11, with a pulling line (8) arranged for being attached to a forward end (31) of said trawl net (5) or said trawl sack (3) or said trawl sack extension (35), for hauling said trawl sack (3) into said lock chamber (1).

13. (Currently Amended) The vessel of claim 12, in which said pulling line (8) is arranged for being extended from a net drum (7) arranged on a trawl deck (10), through said forward trunk channel (16) and through said lock chamber (1), by means of a conveyor device (13a, 13b).

14. (Currently Amended) The vessel of claim 12, in which said pulling line (8) is arranged for being extended from a net drum (6, 7) and at least through the lock chamber (1) and through said aft trunk channel (12) and said sluiceway (2).

15. (Currently Amended) The vessel of claim 1, having a transverse roller (20b) in deck level at the top of said stern (21), for guiding the trawl net during ejection.

16. (Currently Amended) The vessel of claim 1, having a lock canal (4) arranged between said sluiceway (2) and said lock chamber (1), said lock canal (4) having a somewhat relatively smaller cross-section area than the cross-section area of said lock chamber (1).

17. (Currently Amended) A The vessel ~~according to~~ of claim 1, in which a lower lock chamber storage sump (1b) is arranged in a widened portion in said lock chamber (1), with a lock chamber floor (19) being arranged deeper than a lower part of said sluiceway (2), and a horizontal grating (1e).

18. (Currently Amended) A The vessel ~~according to~~ of claim 16, in which the lock chamber (1) is widened forward of said lock canal (4) and above ~~said a horizontal grating (1e)~~ and said lock chamber storage sump (1b) arranged for providing space for fish being discharged from said trawl sack through said zips (33h, 33sb, 33p).

19. (Currently Amended) The vessel ~~according to~~ of claim 1, said trawl sack-(3) having one or more horizontal zips (33h) in either starboard or port sides of the trawl sack-(3), to release the catch sideways.

20. (Currently Amended) A ~~The~~ vessel ~~according to~~ of claim 1, with a baffle plate (9b) arranged to be moved to block a part of the lock chamber's (1) cross-section between said lock canal (4) and said lock chamber-(1), for attenuating sloshing in said lock chamber-(1).

21. (Currently Amended) A ~~The~~ vessel ~~according to~~ of claim 1, with a submerged hind part (41) of the vessel's bottom (22) and stern-(21), in which said submerged hind part (41) envelopes the sluiceway (2).

22. (Currently Amended) A ~~The~~ vessel ~~according to~~ of claim 1, having an inspection trunk or shaft (14) running through the lock chamber ceiling-(18), mainly over the middle portion of the lock chamber (1), for inspecting and manual handling of the trawl sack-(3), possibly manual splitting of the trawl sack (3)-if a release line for the zip (33h, 33sb, 33p) at the trawl sack (3)-cannot be released via a release line through the forward or aft trunk.

23. (Cancelled)

24. (Currently Amended) A ~~The~~ vessel ~~according to~~ of claim 1, having one or more sluiceways (2) arranged to the side of said vessel's ~~centreline~~ centerline, in said stern-(21).

25. (Currently Amended) A method for trawl catching of marine bio-resources, with a vessel comprising trawl winches (62) and trawl drums (6) for ejecting and hauling a trawl net (5) and ancillary lines-(51, 61), with a trawl sack (3) attached to the trawl net-(5), said trawl sack (3) arranged for keeping the catch, ~~characterized in comprising:~~

hauling said trawl sack (3) containing the catch, from the sea, through a sluiceway-(2) mainly below ~~said vessel's waterline~~ a waterline of said vessel, to a lock chamber (1) having a water

volume being mainly below said vessel's waterline, and releasing said catch along zips (~~33h, 33sb, 33p~~) in the trawl sack (3), through a grating to a lock chamber storage sump (~~1b~~); and

hauling in said trawl net (~~5~~) over a transverse roller (~~20b~~) near the sluiceway (~~2~~), and the trawl sack net is then separated from the trawl sack (3) and possibly ~~the~~ a trawl sack extension (35), whereby the trawl sack and the trawl sack extension ~~is~~ are hauled in separately through said sluiceway (~~2~~).

26. (Currently Amended) The method according to claim 25, in which the trawl sack is opened along a vertical zip (~~33v~~) and hauled up through a forward or aft trunk channel so that the catch is kept in the lock chamber, and that the fish is pumped out of the lock chamber by means of a fish pump to ~~e.g.~~ either a storage area or for refining on board the vessel.

27. (Currently Amended) The method according to claim 25, further comprising using a the trawl sack extension (~~35~~) arranged between the trawl sack (3) and the trawl net (~~5~~).

28. (Currently Amended) The method according to claim 25, further comprising using trawl doors (~~60~~) which are disconnected from the hauling lines (~~51, 61~~) before hauling the trawl net on board the vessel.

29. (New) A method for trawl catching of marine bio-resources, with a vessel including a trawl winch and a trawl drum for ejecting and hauling a trawl net, with a trawl sack attached to the trawl net, said trawl sack arranged for keeping the catch, the vessel including a lock chamber in a stern of said vessel and a forward trunk channel leading up from said lock chamber, the method comprising:

hauling the entire trawl net through the lock chamber and winding it continuously onto the drum above the forward trunk channel;

unzipping horizontally arranged zips of the trawl sack when the trawl sack, with the catch, arrives to the lock chamber; and

permitting the catch to fall out and drop through a grid to an underlying chamber.